

CLAIMS

What is claimed is:

1. A herbicidal composition, comprising: a fatty acid of a type and in an effective amount to provide a herbicidal effect when applied to a plant and an additive, having substantially no herbicidal effect on the plant in the absence of the herbicide, but which increases the herbicidal effect of the composition on the plant beyond that of the composition without the additive.
2. The composition of claim 1, wherein the fatty acid herbicide includes at least one member selected from the group consisting of pelargonic acid, caprylic acid, caproic acid, capric acid, oleic acid, acetic, butyric acid, valeric acid, hexanoic acid and heptanoic acid.
3. The composition of claim 1, wherein the fatty acid herbicide includes at least one member selected from the group consisting of pelargonic acid, caprylic acid, caproic acid, capric acid and oleic acid.
4. The composition of claim 1, wherein the fatty acid herbicide includes at least one member selected from the group consisting of acetic, butyric acid, valeric acid, hexanoic acid and heptanoic acid.
5. The composition of claim 1, wherein the fatty acid herbicide comprises caprylic acid and/or pelargonic acid.
6. The composition of claim 1, wherein the additive includes at least one member selected from the group consisting of succinic acid, succinic acid derivatives,

tartaric acid, citric acid, malic acid, lactic acid, adipic acid, pine oil derivatives, limonene, ammonium tartrate, ammonium chloride, ammonium sulfate and sodium salicylate.

7. The composition of claim 1, wherein the additive includes a member selected from the group consisting of succinic acid, dimethyl succinic acid, calcium succinate, magnesium succinate, diammonium succinate and ammonium succinate.

8. The composition of claim 1, wherein the additive includes at least one member selected from the group consisting of tartaric acid, citric acid, malic acid, lactic acid, adipic acid and pine oil derivative, limonene and derivatives thereof.

9. The composition of claim 1, wherein the additive includes at least one member selected from the group consisting of ammonium tartrate, ammonium chloride and ammonium sulfate.

10. The composition of claim 1, wherein the herbicide and additive comprise 0.1 to 30% of the composition.

11. The composition of claim 1, wherein the ratio of herbicide to additive is 1:10 to 20:1.

12. The composition of claim 1, wherein the herbicide and additive comprise about 0.5 to 15% of the composition in a ratio of about 1:1 to 20:1.

13. The composition of claim 1, wherein the additive comprises succinic acid and the herbicide comprises pelargonic acid and/or caprylic acid.

14. A method of enhancing the herbicidal activity of an organic herbicide, comprising adding to the herbicide an effective amount of an additive having

substantially no herbicidal activity and thereby increasing the herbicidal activity of the herbicide.

15. The method of claim 14, wherein the additive includes a member selected from the group consisting of succinic acid, limonene, pine oil derivatives, succinic acid derivatives, tartaric acid, citric acid, malic acid, lactic acid, adipic acid, ammonium tartrate, ammonium chloride and ammonium sulfate.

16. The method of claim 14, wherein the additive includes succinic acid.

17. The method of claim 15, wherein the ratio of herbicide to additive is about 1:1 to 5:1.

18. A method of controlling plant growth, comprising: applying to plants a herbicidally effective amount of a herbicidal composition comprising a fatty acid of a type to provide a herbicidal effect when applied to a plant and an additive, having substantially no herbicidal effect on the plant in the absence of the herbicide, but which increases the herbicidal effect of the composition on the plant beyond that of the composition without the additive.

19. The method claim 18, wherein the fatty acid herbicide includes at least one member selected from the group consisting of pelargonic acid, caprylic acid, caproic acid, capric acid, oleic acid, acetic, butyric acid, valeric acid, hexanoic acid and heptanoic acid and the additive includes at least one member selected from the group consisting of succinic acid, succinic acid derivatives, tartaric acid, citric acid, malic acid, lactic acid,

adipic acid, pine oil derivatives, limonene, ammonium tartrate, ammonium chloride, ammonium sulfate and sodium salicylate.

20. The method of claim 18, wherein the herbicide comprises pelargonic and/or caprylic acid and the additive comprises succinic acid.

21. A herbicidal composition, comprising sodium salicylate and an additive selected from the group consisting of succinic acid, succinic acid derivatives, tartaric acid, citric acid, malic acid, lactic acid, adipic acid, pine oil derivatives, limonene, ammonium tartrate, ammonium chloride, ammonium sulfate and combinations thereof.

22. The composition of claim 21, wherein the additive comprises succinic acid.

23. A herbicidal composition, comprising glufosinate-ammonium or glyphosate and an additive selected from the group consisting of succinic acid, succinic acid derivatives, tartaric acid, citric acid, malic acid, lactic acid, adipic acid, pine oil derivatives, limonene, ammonium tartrate, ammonium chloride, ammonium sulfate and combinations thereof.

24. The composition of claim 23, wherein the additive comprises succinic acid.